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ABSTRACT

Data are presented based on a follow-up study of graduate service assistants who received a master's degree in industrial education from Ball State University from 1953 through 1973. A total of 143 (97 percent) of these individuals returned usable questionnaires containing data related to their career patterns as well as evaluative data that contributed to assessing the effectiveness of both the graduate assistantship program and the master's program in industrial education. Most of the respondents majored in industrial arts education while pursuing the bachelor's degree and entered the assistantship and master's programs with little or no teaching experience. Many gained prior work experience in industry. The evaluative data indicated that both programs generally met the needs of and contributed to the career development of service assistants. The data also indicated that the primary goal of the master's program was to prepare individuals for teaching positions in industrial arts education. Respondents were generally satisfied with the course offerings, although service assistants also felt that more attention should be given to courses reflecting the broader aspects of industry and technology. Recommendations for improving the programs are included. (Author/LBH)

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Graduate Service Assistants: A Research Report

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PREFACE

Most studies concerned with graduate assistantships focus on programs that employ teaching and/or research assistants. Few studies have been conducted that concentrate on programs that employ graduate *service* assistants. Interestingly, no studies have been located that sought to evaluate assistantship programs utilizing graduate service assistants in industrial teacher education departments. Thus, this report presents data based on a follow-up study of graduate service assistants who received a master's degree in industrial education from Ball State University. And although limited to service assistants of one institution, it is believed that interested industrial educators, as well as educators in other disciplines, will discover procedures, findings, and recommendations useful for conducting similar studies in their own institutions or for initiating similar programs.

Appreciation is expressed to the former graduate service assistants for supplying the data which made this study possible.

Appreciation is also extended to Research Office personnel for their assistance in processing the data, to Mr. Michael Steczak and Mr. Charles Ridgeway of the Department of Industrial Education and Technology for printing portions of this report, and to Janet Johns, Elsie Rogers, Mary Burgess, and Nan Chupp for typing this manuscript.

Finally, special appreciation is extended to my wife, Mary Lou, for her constant encouragement and assistance.

R.V.B.

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INTRODUCTION

Nature of the Study

Graduate assistants have become established members of the nation's institutions of higher education. While employed by colleges and universities, graduate assistants assume a variety of responsibilities which may be carried out individually or by assisting regular faculty members with such duties as teaching, research, laboratory supervision and development, and grading papers. If the student holding an assistantship position is provided experiences that are varied and have educational value, they can greatly contribute to his or her professional development. The college or university, on the other hand, benefits from the services provided by the student in return for a stipend or a combination of a stipend and tuition or fee waiver.

In spite of the benefits that can be derived from assistantship positions, a number of researchers have revealed several shortcomings in the nation's assistantship system. These are: (1) the unplanned nature of programs and the haphazard manner in which assignments are made (Brown, 1962; Clark, 1963; Heiss, 1967; Nowlis, Clark, and Rock, 1968), (2) the lack of training and/or supervision of graduate assistants (Brown, 1962; Clark, 1963; Tucker, Gottlieb, and Pease, 1964; Select Committee, 1966; Koen and Ericksen, 1967; Heiss, 1967; Nowlis, Clark, and Rock, 1968), (3) inadequate stipends (Davis, 1962; Wilson, 1965; Fidler, 1968), and (4) the routine and menial work assistants are often asked to perform (Brown, 1962; Tucker, Gottlieb, and Pease, 1964; Select Committee, 1966; Heiss, 1967).

The vast majority of studies concerned with graduate assistantships, however, focus on programs that utilize teaching and/or research assistants. Few studies have been conducted that focus on programs that employ students whom Fidler (1968) classified as *service* assistants. Service assistants perform duties such as clerical work, classroom and laboratory supervision, laboratory development and other similar duties which do not primarily involve teaching or research.

Although no studies have concentrated on service assistants in industrial teacher education departments, Ginther (1964) found that "instructor's assistants" were employed in forty-five of eighty-six institutions with industrial education graduate programs. However, since the

topic of assistantships was not Ginther's primary concern, no definition of "instructor's assistant" was included. The only other study relating to graduate assistants in industrial education was conducted by Gurbach (1973) and dealt with the functions of graduate teaching assistants.

Adding further confusion to the problems inherent in the graduate assistantship system is the fact that many graduate assistants are working toward a master's degree, and even this degree is being criticized. Critics of graduate education have stated that the master's degree is so diverse and has so little significance that in many fields it barely serves a useful purpose. Factors contributing to the low esteem attached to the master's degree have been the continued expansion in the number and types of master's degrees offered in the United States. Dressel (1971) reported that over six-hundred institutions award master's degrees, while Snell (1965) revealed that there were nearly four-hundred master's degree titles being used.

Because state boards of education have increasingly required a master's degree for permanent teaching certification, it is a degree that has become associated with professional education. It has been estimated that approximately half of all master's degrees granted are in the field of education.

Studies of graduate programs leading to a master's degree in industrial education have exposed diverse practices and opinions concerning the nature and characteristics of such programs. Common among the findings have been: (1) a lack of uniformity in graduate credit hours (Hankammer, 1936; Struck, 1941; Feirer, 1947; Kohler, 1952; Dean and Lathrop, 1961; Ginther, 1964), (2) disagreement on objectives (Hankammer, 1936; Feirer, 1947; Ciancone, 1962; Gysler, 1965), (3) a wide variation in course offerings (Hankammer, 1936; Struck, 1941; Kohler, 1952), and (4) a lack of agreement concerning the emphasis that should be placed on general education courses, industrial education professional courses, and industrial education technical courses (Schwalm, 1952; Swanson, 1964; Ginther, 1964; Olson, 1966; Gavin, 1968).

The foregoing tends to magnify the importance of evaluation in higher education. It has been discovered, however, that colleges and universities seldom engage in a systematic evaluation of their programs. Because of this they continually neglect to obtain beneficial evaluative data from their graduates. One method commonly used to secure this type of data is a follow-up study. Surprisingly, only four

follow-up studies of master's degree graduates with majors in industrial education have been located (Peoples, 1940; Thompson, 1949; Thomas, 1950; Webster, 1953). Although no one research design will assess all phases of educational programs, a follow-up study of graduates can supply a vital portion of the evaluative information essential to making informed judgments about program changes. Since the ultimate test of educational programs is reflected in their graduates, follow-up data permit educators to appraise their programs in light of the performance of individuals who are employed in positions for which they were prepared. Additionally, faculty members can become more aware of student needs and a closer relationship with graduates can be achieved. Information obtained can also serve in: (1) constructing profiles of the career patterns of graduates, (2) providing current students with insights into what is likely to face them after graduation, (3) clarifying program objectives, (4) providing a basis for program improvement, and (5) providing faculty members with a stimulus for continuing their study of programs designed to meet the needs of students.

Problem

A need existed for evaluating the graduate assistantship program and the master's degree program in industrial education at Ball State University. The inadequacies in the nation's assistantship system, the paucity of studies concerning graduate service assistants in industrial education, the downgrading of the master's degree in general, and more specifically the inconsistencies in master's degree programs in industrial education, and the lack of evaluative data from former graduate service assistants who have earned a master's degree in industrial education at Ball State University prompted this investigation.

Purpose

The purpose of this study was to: (1) investigate the professional experiences of former graduate service assistants, (2) analyze their evaluation of the graduate assistantship program and the master's degree program in order to determine the efficacy of both programs, and (3) state recommendations for program improvement.

Definitions

The following terms are defined as they are used in this study.

Graduate Assistant. A generic term that refers to a graduate student employed by a college or university to assist a regular faculty member or members in one or more of the following areas: teaching, research, administration, or service.

Graduate Service Assistant. Denotes one type of graduate assistant and refers to a graduate student who was employed in the Department of Industrial Arts or the Department of Industrial Education and Technology to assist a supervising faculty member or members with such duties as laboratory supervision and development, laboratory maintenance, grading papers and projects, and other similar duties.

Graduate Assistantship Program. Refers to the sum total of policies and practices affecting graduate service assistants and the duties performed by service assistants who were employed in the Department of Industrial Arts or the Department of Industrial Education and Technology.

These policies, practices, and duties include those established by departmental faculty members such as determining and assigning graduate service assistants to specific laboratories and supervising faculty members and determining the types of duties service assistants would perform. Other policies and practices were those established by the university such as determining the number of hours graduate assistants would work per week, and the amount of stipends paid to graduate assistants.

Graduate Assistantship Assignment. Refers to the sum total of duties such as grading papers and laboratory supervision and development performed by graduate service assistants who were assigned to work in a specific laboratory such as woods or graphic arts under the supervision of one or more faculty members in the Department of Industrial Arts or the Department of Industrial Education and Technology.

Industrial Education. Refers to the program offered at Ball State University to prepare industrial arts and vocational industrial (trade and industrial) teachers.

Industrial Arts Education. Refers to that phase of liberal education that relates to how industry substantially changes the form of materials

to increase their value in order to meet the needs and wants of people, and the occupations and problems related to those changes.

Vocational Industrial Education (Trade and Industrial Education). Refers to that specialized education and training that prepares individuals for gainful employment and increases the efficiency of those already employed in the industrial occupations.

Source of Data

The data for the study were solicited from the 147 former graduate service assistants who were employed in the Department of Industrial Arts or the Department of Industrial Education and Technology at Ball State University from 1953 through the 1973 academic year. These individuals also received a master's degree in industrial education.

Procedures

Instrument Development. A review of the literature was made to determine guidelines to follow in designing and constructing an acceptable questionnaire to be sent to the subjects. Specific questionnaire items were formulated after other literature was analyzed to isolate potential problem areas that seemed to warrant close examination. The literature surveyed was related to the following areas: (1) development of the graduate assistantship program and the master's degree program at Ball State University, (2) graduate assistantship programs, (3) master's degree programs in industrial education, and (4) similar follow-up studies.

Instrument Validation. A draft of the questionnaire was submitted to six former graduate service assistants. Each of these pilot test participants was informed of the nature and purpose of the study and was asked to examine the format and content of the instrument for presentation, relevance, clarity, ease of responding, and completeness. Based on the results of the pilot test several revisions were incorporated into the final form of the questionnaire.

Instrument Administration and Follow-Up. In September 1974 each former graduate service assistant was mailed: (1) a copy of the questionnaire marked with an instrument number that was used for follow-up purposes; (2) a cover letter that included a brief description of the study; and (3) a stamped, return-addressed envelope. The

follow-up procedure used in the study included the use of three different techniques. The first follow-up consisted of a postal card reminder that was sent to those individuals who had not returned questionnaires by October 10, 1974.

Ten days after the first follow-up, another mailing was made to those persons who had not responded to the second contact. This mailing included: (1) a copy of the questionnaire; (2) a follow-up letter; and (3) a stamped, return-addressed envelope.

A third follow-up consisted of making telephone calls to non-respondents and resulted in making contact with all service assistants. Of the 147 graduate service assistants receiving the questionnaire, 143, or 97.3 percent, returned usable instruments by the cut-off date of November 6, 1974.

ANALYSIS OF DATA

Professional Education, Occupational Experiences, and Professional Responsibilities

This section presents an analysis of the principal data pertaining to the first part of the questionnaire. The purpose of this information is to provide a profile of the career patterns of the former graduate service assistants. The findings representing this analysis are reported in Tables One through Eleven and are located in the Appendix.

Graduate service assistants received their bachelor's degree from fifty institutions representing twenty-seven states. And as anticipated, almost 71 percent of the respondents majored in industrial arts education while pursuing the bachelor's degree.

Since industrial work experience is desirable for teachers of industrial education, it was encouraging to discover that almost one-half (48.3 percent) of the service assistants gained industrial work experience prior to starting their master's work. On the other hand, considerably less than one-half (31.5 percent) of the respondents gained teaching or other educational work experience before entering the master's program. By comparison, almost all of the service assistants (97.9 percent) held positions in education after they completed the master's degree. Most of these individuals were engaged in teaching either at the senior high school level (46.9 percent) or at the college or university level (35 percent).

Surprisingly, a large percentage (41.3 percent) of the service assistants have either completed or are currently pursuing a graduate degree beyond the master's degree. Most of these fifty-nine individuals have earned or are seeking an Ed.D. or a Ph.D. degree with a major in industrial education.

A large majority of the respondents (86 percent) currently hold positions in the field of education. Interestingly, 42 percent of the service assistants hold positions in colleges or universities, while 41.3 percent are employed in elementary or secondary school level positions. Most of the service assistants, however, are involved in teaching either at the college or university level (30.1 percent) or at the senior high school level (21.7 percent). Overall, approximately 75 percent of the respondents hold the title of teacher, while 16 percent are department

chairmen. For those individuals employed at the college or university level, approximately 38 percent hold the rank of assistant professor.

The professional responsibilities most often assumed by the sixty individuals employed in colleges and universities are teaching undergraduate industrial education courses (86.7 percent) and serving on departmental committees (70 percent). Additionally, over 71 percent of the fifty-nine respondents employed in public schools teach industrial arts courses, while only 18.6 percent teach vocational-industrial courses.

Graduate Assistantship Program

On the second part of the questionnaire, the respondents provided evaluative data pertaining to strengths and weaknesses of the graduate assistantship program at Ball State University, various aspects of the assistantship that did or did not contribute to their career development, and suggestions for improvement. These data are analyzed here and reflect the findings presented in Tables Twelve through Twenty-three which are located in the Appendix.

Graduate service assistants typically were assigned to work in a specific laboratory such as graphic arts, metals, or woods under the supervision of one or more faculty members. An assignment of this nature had service assistants performing a variety of duties. The two most frequently performed by the respondents were supervising a laboratory (97.7 percent) and laboratory maintenance (92.4 percent). The respondents also indicated the extent to which these as well as other duties contributed to their career development. The response alternatives checked included "much," "some," "little," and "none." Thus, mean values were calculated by assigning numerical values of from one to four to each of the four response alternatives. According to this scale, "much" was assigned a value of one, "some" a value of two, "little" a value of three, and "none" or "no" were assigned a value of four. Mean values of 2.0 or less indicated findings in a positive direction, while mean values greater than 2.0 denoted findings in a negative direction. This scale was used to calculate mean values for several other questionnaire items as reported in the tables that utilized the aforementioned response alternatives. Based on mean values it was found that supervising a laboratory was the duty that contributed most to the career development of service assistants. The respondents also felt that the following four duties made a positive contribution to their career development: (1) laboratory maintenance, (2) con-

struction and repair of laboratory equipment, (3) producing instructional materials, and (4) teaching.

Approximately 72 percent of the respondents assumed teaching responsibilities while employed as service assistants. Less than one-fourth, however, had complete responsibility for teaching courses. Therefore, the term service assistant, as used in this study, appears to be valid in describing the type of graduate assistants that have been employed in the Department of Industrial Education and Technology at Ball State University. This was further supported when it was discovered that the twenty-nine respondents who had total responsibility for teaching more than one course did so for a mean of less than one and one-half quarters.

Over 53 percent of the respondents were neither invited to attend faculty meetings nor serve on departmental committees while employed as service assistants. By comparison, approximately 23 percent of the service assistants felt that attending meetings should be an integral part of the program, while nearly 56 percent felt that both attending faculty meetings and serving on departmental committees are activities that should be an integral part of the assistantship program.

Nearly 91 percent of the service assistants regarded an orientation to the assistantship program as important. And although over 71 percent of the respondents were provided at least an adequate orientation, several individuals rated the one they received as inadequate, and over 20 percent did not receive an orientation. Moreover, a large majority of the respondents (64.6 percent) felt that the orientation to their assistantship assignment provided by their supervising faculty members was adequate or better. More than 13 percent of the service assistants, however, felt that this orientation was less than adequate. Perhaps more important was the finding that nearly 22 percent of the service assistants felt that their supervising faculty members did not clearly define their duties and responsibilities.

A large majority of the service assistants (81.4 percent) received a satisfactory amount of supervision from their supervising faculty members. On the other hand, the respondents received evaluative feedback concerning their work on an extremely irregular basis. For example, almost 29 percent of the respondents indicated receiving evaluative feedback weekly, while over 15 percent received evaluative feedback on a yearly basis. Another 14 percent of the service assistants never received evaluative feedback from their supervising faculty members. In spite of this inconsistency, a large majority of the re-

spondents (81.2 percent) felt that their supervising faculty members provided a positive influence in their career development.

Almost 91 percent of the respondents reported aspects of the assistantship that they felt were of most benefit to their career development. The following aspects were listed most frequently: (1) professional relationship with faculty members, (2) professional relationship with graduate assistants and other graduate students, and (3) teaching.

Approximately 55 percent of the service assistants related aspects of the assistantship that they felt were of least benefit to their career development. An analysis of these aspects revealed that twenty-one of the respondents listed aspects that they felt were routine or menial. Some of these included repairing equipment, proctoring examinations, clean-up duties, and repairing office furniture.

The vast majority of the service assistants (90.2 percent) felt that the graduate assistantship in general made a positive contribution to their career development. Additionally, over 57 percent of the respondents indicated that both their experiences as a graduate assistant and their master's degree course work were equally valuable in contributing to their career development.

The suggestions offered most frequently by the respondents for improving the graduate assistantship program included: (1) provide more teaching experiences, (2) involve assistants in more departmental activities, and (3) clarify and enhance the status and activities of service assistants.

Master's Degree Program

The data supplied by the respondents on the third and final section of the questionnaire related to strengths and weaknesses of the master's program at Ball State University, various aspects of the master's program that were or were not instrumental in contributing to their career development, and suggested improvements. Tables Twenty-four through Thirty-six contained in the Appendix report the specific findings.

Of the several plans offered at Ball State University for satisfying master's degree requirements, over 51 percent of the respondents completed the one which involved the writing of three graduate course papers. Additionally, over 85 percent of the respondents felt that the plan they completed made a positive contribution to their career development.

The respondents listed sixty-one courses in ten different areas taken during the master's program that definitely contributed to their career development. An analysis of the courses revealed that 45.5 percent of the service assistants listed technical industrial education type courses that definitely contributed, 34.3 percent mentioned research and statistics courses, and approximately 30 percent reported courses related to curriculum and instruction in industrial education that definitely contributed to their career development.

The data revealed that the master's program both stimulated and prepared the vast majority of respondents to achieve two of eleven goals (Table 27). These were to: (1) seek a teaching position in industrial arts education in a public school and/or (2) seek a teaching position in industrial arts education at the college or university level.

Similarly, most of the respondents felt that only one of six objectives was given some emphasis in the master's program (Table 28). This objective was developing teaching competencies. By comparison, the service assistants were of the opinion that all six objectives should be given more emphasis. However, the two objectives that they felt should be emphasized most included: (1) developing teaching competencies and (2) developing curriculum development competencies.

A majority of the respondents have engaged in three of eight activities for which they felt the master's program provided at least some preparation (Table 29). These activities were: (1) developing and implementing a curriculum, (2) developing instructional materials, and (3) planning educational facilities.

Service assistants were asked to estimate the percentage of the master's program that they felt should be devoted to each of five areas (Table 30). A large majority of the respondents indicated that the major emphases of the program should be devoted to both technical and professional industrial education courses.

Over 69 percent of the service assistants suggested seventy-two courses that they felt would be of value to master's degree students majoring in industrial education. A review of the courses showed that 60.8 percent of the respondents suggested courses related to curriculum and instruction. Some of these courses were Curriculum Development in Industrial Education, Teaching Aids and Devices in Industrial Education, teaching methods, and evaluation. Approximately 60 percent of the service assistants suggested courses focusing on the broader aspects of industry and technology. Several of these courses included communication, economics, management, structure of industry, and modern technology.

Seventy-nine percent of the respondents rated the library materials related to industrial education that were available in the university library as adequate or better. A similar rating was reported by 78.4 percent of the respondents pertaining to the adequacy of the technical laboratories in the industrial education department.

The service assistants were generally well satisfied with the assistance they received from faculty members both in industrial education and in other university departments. Over 73 percent of the respondents indicated that beneficial assistance was always available from industrial education faculty members, while nearly 80 percent reported that beneficial assistance was sometimes or always available from faculty members in other university departments.

The respondents reported aspects of the master's program that they felt were of most and least benefit to their career development. Mentioned most often by 24.5 percent of the respondents as being of most benefit to their career development was the association with professional faculty members. Approximately 13 percent felt that technical industrial education courses were of most benefit, while 10 percent listed the course Curriculum Development in Industrial Education. An analysis of the aspects revealed that almost 24 percent of the respondents listed professional industrial education courses, and approximately 17 percent mentioned one or more technical industrial education courses that were of most benefit to their career development. Sixty-four percent of the service assistants either did not respond or stated that there were no aspects of the master's program that were of least benefit to their career development. This seemed to indicate that the majority of the respondents were generally well satisfied with the master's program.

The specific suggestions offered most frequently by the respondents for improving the master's program were to determine individual student needs and to develop program goals. The majority of the suggestions, however, were aimed at improving the professional industrial education course offerings. Approximately 34 percent of the service assistants gave suggestions such as emphasize innovative approaches in industrial education, provide more teaching opportunities, and provide more options in industrial education professional courses.

SUMMARY AND RECOMMENDATIONS

Summary

Graduate service assistants have been an integral part of the Department of Industrial Arts or the Department of Industrial Education and Technology at Ball State University for over twenty years. This study sought data from the 147 individuals who were employed as service assistants and completed a master's degree in industrial education from 1953 through 1973. One hundred forty-three, or 97.3 percent of these individuals, returned usable questionnaires containing data related to their career patterns as well as evaluative data that contributed to assessing the effectiveness of both the graduate assistantship program and the master's program in industrial education.

The demographic data revealed that most of the respondents majored in industrial arts education while pursuing the bachelor's degree and entered the assistantship and master's programs with little or no teaching experience. Many, however, gained prior work experience in industry. A considerable number of the service assistants have either completed or are currently seeking an advanced graduate degree with a major in industrial education. Most of the respondents are teachers of industrial arts education with a surprisingly large number engaged in teaching at the college or university level.

An analysis of the evaluative data indicated that the graduate assistantship program and the master's program in industrial education have generally met the needs of and contributed to the career development of service assistants. But even though the data revealed numerous strengths, it also indicated several weaknesses of both programs. For example, while several assistantship duties contributed to the career development of service assistants, others were limited in this respect. Some of the respondents felt that certain duties were excessive, menial, or routine. Furthermore, some service assistants were uncertain about their duties and responsibilities as well as their status in the department. This may have occurred due to a lack of communication. It was discovered that some service assistants were not provided an orientation to the assistantship program, while others felt that the one they received was less than adequate. The orientation to their assistantship assignment was also rated less than adequate by

several respondents and a number of others stated that their duties and responsibilities were ill defined. Additionally, the respondents were of the opinion that service assistants should be permitted to engage in more departmental activities.

Although most of the respondents engaged in teaching during their assistantships, few had complete teaching responsibilities. The majority of the service assistants either taught when faculty members were absent or during times when they were supervising a laboratory. The findings suggest that these types of teaching experiences do contribute to the career development of service assistants. Service assistants felt, however, that more teaching opportunities should be provided.

Supervising faculty members provided ample supervision to most of the respondents and also provided a positive influence in their career development. However, they supplied evaluative feedback to service assistants on an extremely irregular basis. This implied that little emphasis has been placed on this aspect of the assistantship program.

The data indicated that the primary goal of the master's program in industrial education has been to prepare individuals for teaching positions in industrial arts education. And although the program did provide the stimulation and preparation for some service assistants to achieve other goals, a number of the respondents were uncertain about the goals of the program. Additionally, the vast majority of the respondents felt that greater emphasis should be given to the objectives of the master's program in industrial education.

The respondents were generally well satisfied with both the technical and professional industrial education course offerings and felt that courses related to these two components should be the major focus of the master's program. Numerous suggestions, however, were offered for improving the professional industrial education course offerings. The respondents suggested a variety of courses related to developing, implementing, and evaluating curriculum and instruction that they felt would benefit future graduate students in industrial education. Service assistants also felt that more attention should be given to courses reflecting the broader aspects of industry and technology.

Recommendations

An analysis of the evaluative data resulted in eight recommendations aimed at improving both the graduate assistantship program and the master's program in industrial education. These recommendations are as follows:

1. All graduate service assistants should be provided with an orientation to the graduate assistantship program as well as to their assistantship assignments.
2. Efforts should be made to avoid assigning duties that are excessive, unnecessarily menial, or routine.
3. Graduate service assistants should be provided more opportunities to gain planned teaching experiences.
4. Supervising faculty members should provide service assistants with evaluative feedback concerning their work on a regular basis.
5. Attention should be given to clarifying and enhancing the professional status, responsibilities, and activities of service assistants.
6. The department should formulate and disseminate a written mission statement to all graduate students that specifies the goals and objectives of the master's program.
7. Emphasis should continue to be placed on both technical and professional industrial education courses.
8. Attention should be given to enhancing and/or expanding the professional industrial education course offerings.

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APPENDIX

Tables Presenting the Major Findings

TABLE 1. INSTITUTIONS WHERE GRADUATE SERVICE ASSISTANTS RECEIVED BACHELOR'S DEGREE

Institution	Number	Percent
Ball State University (Indiana)	29	20.2
Central Connecticut State College	10	7.0
Millersville State College (Pennsylvania)	9	6.3
State University College at Buffalo (New York)	8	5.6
University of Wisconsin-Stout	7	4.9
Western Illinois University	7	4.9
University of Northern Iowa	6	4.2
State University College at Oswego (New York)	4	2.8
Bowling Green State University (Ohio)	3	2.1
California State College (Pennsylvania)	3	2.1
Chadron State College (Nebraska)	3	2.1
Jackson State College (Mississippi)	3	2.1
Northern Illinois University	3	2.1
Ohio University	3	2.1
Bethel College (Kansas)	2	1.4
Illinois State University	2	1.4
Michigan State University	2	1.4
Northern Michigan University	2	1.4
Purdue University (Indiana)	2	1.4
Rhode Island College	2	1.4
Trenton State College (New Jersey)	2	1.4
University of Wisconsin-Platteville	2	1.4
Western Michigan University	2	1.4
Adams State College (Colorado)	1	0.7
Arizona State University	1	0.7
Bemidji State College (Minnesota)	1	0.7
Berea College (Kentucky)	1	0.7
Concordia Teachers College (Illinois)	1	0.7
Eastern Illinois University	1	0.7
Gorham State College (Maine)	1	0.7
Kansas State College	1	0.7
Keene State College (New Hampshire)	1	0.7
Miami University (Ohio)	1	0.7
Mississippi Valley State College (Mississippi)	1	0.7
Montclair State College (New Jersey)	1	0.7
Morehead State University (Kentucky)	1	0.7
New Mexico Highlands University	1	0.7

TABLE 1 (Continued)

Institution	Number	Percent
Northern State College (South Dakota)	1	0.7
Northwest Missouri State University	1	0.7
Ohio Northern University	1	0.7
Peru State College (Nebraska)	1	0.7
San Diego State University (California)	1	0.7
Savannah State College (Georgia)	1	0.7
Southern Illinois University	1	0.7
University of Alabama	1	0.7
University of Northern Colorado	1	0.7
University of South Dakota at Springfield	1	0.7
West Virginia Institute of Technology	1	0.7
Western State College (Colorado)	1	0.7
Winona State College (Minnesota)	1	0.7
Totals	143	100.0

TABLE 2. GRADUATE SERVICE ASSISTANTS' MAJORS FOR THE BACHELOR'S DEGREE

Majors	Number	Percent
Industrial Arts Education	101	70.6
Industrial Education	38	26.6
Industrial Technology Education	2	1.4
Biology	1	0.7
Education	1	0.7
English	1	0.7
Mathematics	1	0.7
Vocational Education	1	0.7

TABLE 3. GRADUATE SERVICE ASSISTANTS' WORK EXPERIENCE OTHER THAN EDUCATIONAL WORK EXPERIENCE BEFORE STARTING MASTER'S DEGREE AND SINCE RECEIVING MASTER'S DEGREE BUT NOT INCLUDING PRESENT POSITION

Work Experience	Before Degree		Since Degree	
	(N)*	(%)*	(N)*	(%)*
Industry	69	48.3	12	8.4
Military	38	26.6	4	2.8
Business	19	13.3	4	2.8
Other (farming, recreation, etc.)	29	20.3	4	2.8

* Some graduate service assistants held positions in more than one experience category.

TABLE 4. GRADUATE SERVICE ASSISTANTS' PRESENT FIELD OF EMPLOYMENT

Field of Employment	Number	Percent
Education	123	86.0
Business	11	7.7
Industry	5	3.5
Other	4	2.8
Totals	143	100.0

TABLE 5. GRADUATE SERVICE ASSISTANTS' EDUCATIONAL WORK EXPERIENCE BEFORE STARTING MASTER'S DEGREE, SINCE RECEIVING MASTER'S DEGREE, AND IN PRESENT POSITION

Educational Work Experience	Before Degree		Since Degree		Present Position	
	(N)*	(%)*	(N)*	(%)*	(N)**	(%)**
Elementary school						
teaching only			4	2.8	1	0.7
administration only						
combined duties as teacher and administrator			1	0.7		
Middle school						
teaching only			4	2.8	2	1.4
administration only						
combined duties as teacher and administrator			1	0.7		
Junior high school						
teaching only	13	9.1	39	27.3	8	5.5
administration only					2	1.4
combined duties as teacher and administrator	2	1.4	1	0.7		
Senior high school						
teaching only	30	21.0	67	46.9	31	21.7
administration only	1	0.7	1	0.7	3	2.1
combined duties as teacher and administrator	1	0.7	4	2.8	7	4.9
Post-secondary vocational or technical school						
teaching only	2	1.4	6	4.2	4	2.8
administration only			1	0.7		
combined duties as teacher and administrator			4	2.8		
College or university						
teaching only	2	1.4	50	35.0	43	30.1
administration only			3	2.1	6	4.2
combined duties as teacher and administrator			4	2.8	11	7.7
Other (military instructor, research associate, etc.)	2	1.4	11	7.7	10	7.0

* Some graduate service assistants held positions in more than one experience category.
** Six graduate service assistants hold positions in more than one experience category.

TABLE 6. GRADUATE SERVICE ASSISTANTS' STATUS OF WORK TOWARD AN ADVANCED DEGREE BEYOND THE MASTER'S DEGREE

Status toward advanced degree	Number	Percent
Have not completed and not pursuing an advanced degree	84	58.7
Completed an advanced degree	31	21.7
Pursuing an advanced degree	28	19.6
Totals	143	100.0

TABLE 7. ADVANCED DEGREE RECEIVED AND ADVANCED DEGREE CURRENTLY BEING SOUGHT BY GRADUATE SERVICE ASSISTANTS

Degrees	Received		Being Sought	
	(N)	(%)	(N)	(%)
Ed.D.	15	48.4	13	46.5
Ph.D.	13	41.9	11	39.3
D.Ed.	2	6.4	3	10.6
Educ.Spec.	1	3.2	1	3.6
Totals	31	100.0	28	100.0

TABLE 8. GRADUATE SERVICE ASSISTANTS' MAJORS FOR ADVANCED DEGREE RECEIVED AND FOR CURRENTLY SOUGHT ADVANCED DEGREE

Majors	Number	Percent
Industrial Education	23	39.0
Industrial Arts Education	8	13.5
Vocational Education	6	10.2
Education	5	8.5
Industrial Technology Education	5	8.5
Educational Administration	3	5.0
Other (Administration, Technical Education, etc.)	9	15.3
Totals	59	100.0

TABLE 9. PRESENT TITLE AND/OR RANK OF GRADUATE SERVICE ASSISTANTS WITH POSITIONS IN EDUCATION

Title and/or Rank	Number*	Percent*
Title		
Teacher	108	75.5
Department chairman	23	16.1
Research specialist	3	2.1
Supervisor	3	2.1
Assistant or vice principal	1	0.7
Curriculum specialist	1	0.7
Dean	1	0.7
Guidance counselor	1	0.7
Other (assistant dean, director, etc.)	16	11.2
Rank		
Instructor	7	11.7
Assistant professor	23	38.3
Associate professor	13	21.7
Full professor	7	11.7

* Some graduate service assistants have more than one title. Some individuals employed at the college or university level have one or more titles in addition to a rank.

TABLE 10. MAJOR RESPONSIBILITIES OF GRADUATE SERVICE ASSISTANTS WHO ARE EMPLOYED IN COLLEGES OR UNIVERSITIES

Major Responsibilities	Number	Percent
Teach undergraduate courses	52	86.7
Serve on a departmental committee	42	70.0
Serve on a college or university committee	37	61.7
Advise undergraduate students	35	58.3
Teach graduate courses	35	58.3
Advise graduate students	19	31.7
Sponsor a college or university student organization	17	28.3
Supervise graduate assistants	17	28.3
Administer a college or university program	11	18.3
Direct or co-direct a research and/or development project	10	16.7
Work on a research and/or development project	10	16.7
Supervise student teachers	9	15.0
Advise doctoral degree students	3	5.0
Other (consulting, conducting doctoral research seminars, etc.)	8	13.3

TABLE 11. MAJOR RESPONSIBILITIES OF GRADUATE SERVICE ASSISTANTS WHO ARE EMPLOYED IN PUBLIC SCHOOLS

Major Responsibilities	Number	Percent
Teach industrial arts courses	42	71.2
Teach vocational-industrial courses	11	18.9
Serve on a school-related professional committee	10	16.9
Serve on a school system-related professional commitee	8	13.6
Sponsor a school-related club	8	13.6
Coach an athletic team	7	11.9
Coordinate a career education program	4	6.8
Teach courses other than industrial arts or vocational	3	5.1
Administer a school program	2	3.4
Administer a school system-wide program	1	1.7
Other (coordinate a vocational program, delegate for teacher's association, etc.)	5	8.5

TABLE 12. DUTIES PERFORMED BY GRADUATE SERVICE ASSISTANTS AND MEAN VALUES REPRESENTING THE EXTENT TO WHICH THE DUTIES CONTRIBUTED TO THEIR CAREER DEVELOPMENT

Duties	N	%	Contributed to Career Development (Mean Values)*
Supervision of laboratory	140	97.7	1.5
Laboratory maintenance	132	92.4	1.8
Construction and repair of laboratory equipment	119	83.3	2.0
Producing instructional materials	95	66.5	2.0
Teaching	103	72.1	2.0
Inventorying materials, equipment, supplies	110	77.0	2.1
Grading tests, papers, projects	104	72.8	2.4
Requisitioning materials, equipment, supplies	85	59.5	2.4
Arranging display cases	119	83.3	2.6
Constructing tests	79	55.3	2.6
Proctoring examinations	101	70.7	2.7
Research	64	44.8	2.7
Others (advising students, etc.)	5	3.5	1.4

* Mean values were calculated using the scale explained on page 8. Mean values of 2.0 or less indicate positive direction, while mean values greater than 2.0 indicate negative direction.

TABLE 13. TYPE OF TEACHING RESPONSIBILITIES ASSUMED BY GRADUATE SERVICE ASSISTANTS AND NUMBER OF QUARTERS THE RESPONSIBILITIES WERE ASSUMED

Type Teaching Responsibility	N	%	No. of Quarters Mean
Taught occasionally when a faculty member was absent	64	44.8	2.3
Taught occasional lessons planned with a faculty member	30	21.0	1.6
Had complete responsibility for teaching more than one course	29	20.3	1.4
Had complete responsibility for teaching one course	7	4.9	2.7

TABLE 14. TYPE OF DEPARTMENTAL ACTIVITIES GRADUATE SERVICE ASSISTANTS WERE INVITED TO ENGAGE IN AND TYPE THEY FEEL SHOULD BE AN INTEGRAL PART OF THE ASSISTANTSHIP PROGRAM

Type Departmental Activities	Invited to Participate		Should Be Integral Part of Program	
	N	%	N	%
Attending faculty meetings	53	37.1	33	23.1
Serving on departmental committees	1	0.7	10	7.0
Both of the above activities	11	7.7	80	55.9
Neither of the above	76	53.1	18	12.6
No response	2	1.4	2	1.4
Other (teaching, more interaction with faculty, etc.)			26	18.2
Totals	143	100.0	*	*

* Some graduate service assistants listed other departmental activities.

TABLE 15. PROVISION FOR AN ORIENTATION TO THE ASSISTANTSHIP PROGRAM FOR GRADUATE SERVICE ASSISTANTS, WHETHER THEY FELT AN ORIENTATION WAS IMPORTANT, AND WHETHER THEIR DUTIES AND RESPONSIBILITIES WERE CLEARLY DEFINED BY SUPERVISING FACULTY MEMBERS

Responses	Provided an Orientation		Orientation Regarded Important		Duties and Responsibilities Clearly Defined	
	N	%	N	%	N	%
Yes	106	74.1	130	90.9	111	77.6
No	29	20.3	5	3.5	31	21.7
No response	8	5.6	8	5.6	1	0.7
Totals	143	100.0	143	100.0	143	100.0

TABLE 16. ADEQUACY OF ORIENTATION TO ASSISTANTSHIP PROGRAM AND SPECIFIC ASSISTANTSHIP ASSIGNMENT

Adequacy of Orientation	Program		Assignment	
	N	%	N	%
More than adequate	20	14.0	38	26.6
Adequate	82	57.3	83	58.0
Less than adequate	4	2.8	19	13.3
No response	37	25.9	3	2.1
Totals	143	100.0	143	100.0

TABLE 17. AMOUNT OF SUPERVISION RECEIVED FROM GRADUATE SERVICE ASSISTANTS' SUPERVISING FACULTY MEMBERS

Amount of Supervision	Number	Percent
Supervision was about the right amount	115	81.4
Some supervision, but less than satisfactory	18	12.6
No supervision, but some was needed	4	2.8
Supervised too closely	3	2.1
No response	3	2.1
Totals	143	100.0

TABLE 18. FREQUENCY OF EVALUATIVE FEEDBACK RECEIVED FROM GRADUATE SERVICE ASSISTANTS' SUPERVISING FACULTY MEMBERS

Amount of Evaluative Feedback	Number	Percent
At least once weekly	41	28.7
At least once monthly	34	23.8
At least once each quarter	18	12.6
At least once during the school year	22	15.4
Never	20	14.0
No response	8	5.6
Totals	143	100.0

TABLE 19. EXTENT TO WHICH GRADUATE SERVICE ASSISTANTS' SUPERVISING FACULTY MEMBERS PROVIDED A POSITIVE INFLUENCE IN THEIR CAREER DEVELOPMENT AND EXTENT TO WHICH THE ASSISTANTSHIP CONTRIBUTED TO THEIR CAREER DEVELOPMENT

Responses	Contribution of Assistantship		Mean*	Positive Influence of Faculty		Mean*
	N	%		N	%	
Much	94	65.7		68	47.6	
Some	35	24.5		48	33.6	
Little	11	7.7		13	9.1	
None	3	2.1		11	7.7	
No response				3	2.1	
Totals	143	100.0	1.5	143	100.0	1.8

* The mean value was calculated using the scale explained on page 8.

TABLE 20. ASPECTS OF THE ASSISTANTSHIP THAT GRADUATE ASSISTANTS FELT WERE OF MOST BENEFIT TO THEIR CAREER DEVELOPMENT

Aspects of Most Benefit	Number	Percent
Professional relationship with faculty	53	37.1
Professional relationship with graduate assistants and other graduate students	23	16.1
Teaching	22	15.4
Laboratory supervision	13	9.1
Working with college students	11	7.7
Working with supervising faculty member(s)	10	7.0
Gained greater insights into profession	9	6.3
Opportunity to work as a department member	7	4.9
Variety of experiences	6	4.2
Producing instructional materials	5	3.5
Others (laboratory maintenance and development, positive learning environment, research, etc.)	38	26.6
No response	13	9.1

TABLE 21. ASPECTS OF THE ASSISTANTSHIP THAT GRADUATE ASSISTANTS FELT WERE OF LEAST BENEFIT TO THEIR CAREER DEVELOPMENT

Aspects of Least Benefit	Number	Percent
Arranging display cases	16	11.2
Excessive laboratory maintenance	11	7.7
Lack of opportunity to teach	8	5.6
Routine clean-up duties	7	4.9
Grading tests, papers, projects	5	3.5
Limited experience	5	3.5
Supervision of laboratory	4	2.8
Others (proctoring examinations, repairing equipment, being used as a laborer, etc.)	30	21.0
No response	64	44.8

TABLE 22. TYPE OF EXPERIENCE GRADUATE SERVICE ASSISTANTS FELT WAS OF GREATEST VALUE IN CONTRIBUTING TO THEIR CAREER DEVELOPMENT

Type of Experience	Number	Percent
Experience as a graduate assistant	35	24.5
Master's degree course work	16	11.2
Both were of equal value	82	57.3
Neither one was of value	3	2.1
Other	13	9.1
No response	5	3.5

TABLE 23. SUGGESTIONS FOR IMPROVING THE ASSISTANTSHIP PROGRAM

Suggested Improvements	Number	Percent
Provide teaching experiences	35	24.5
Allow assistants to attend faculty meetings, serve on departmental committees, and other work of the department	24	16.8
Define objectives of assistantship program as well as role and duties of assistants	15	10.5
Allow assistants to be part of the faculty	12	8.4
Treat assistants as professionals	10	7.0
Emphasize laboratory supervision	8	5.6
Allow assistants to increase technical competencies	7	4.9
Hold seminars for assistants related to careers available in industrial education	6	4.2
Involve assistants in curriculum projects in local schools	6	4.2
Provide a variety of meaningful experiences	5	3.5
Others (provide assistants with more responsibilities, improve orientation, provide assistants with more evaluative feedback, etc.)	40	28.0
No suggestions	41	28.7

TABLE 24. TYPE OF PLAN COMPLETED BY GRADUATE SERVICE ASSISTANTS TO SATISFY MASTER'S DEGREE REQUIREMENTS

Type of Plan	Number	Percent
Three graduate course papers	74	51.7
Creative project	39	27.3
Two graduate course papers	20	14.0
Research paper	6	4.2
Thesis	4	2.8
Totals	143	100.0

TABLE 25. EXTENT TO WHICH THE PLAN COMPLETED BY GRADUATE SERVICE ASSISTANTS TO SATISFY MASTER'S DEGREE REQUIREMENTS WAS OF VALUE TO THEIR CAREER DEVELOPMENT

Extent of Value	N	%	Mean*
Much value	64	44.8	
Some value	58	40.6	
Little value	16	11.2	
No value	4	2.8	
No response	1	0.7	
Totals	143	100.0	1.7

* The mean value was calculated using the scale explained on page 8.

TABLE 26. COURSES AND AREAS IN WHICH COURSES WERE TAKEN IN GRADUATE SERVICE ASSISTANTS' MASTER'S PROGRAM THAT DEFINITELY CONTRIBUTED TO THEIR CAREER DEVELOPMENT

Courses and Areas	Number	Percent
Industrial Education		
Curriculum Development in I.Ed.	26	18.2
Supervision of the Vocational and Practical Arts	22	15.2
Teaching Aids and Devices in I.Ed.	17	11.9
Research in I.Ed.	15	10.5
Seminar in I.Ed.	14	9.8
Development of I.Ed.	12	8.4
American Industry Practicum	11	7.7
All Technical Courses	10	7.0
Problems in Graphic Arts	9	6.3
Basic Problems in Synthetic Technology	8	5.6
Problems in Metals	8	5.6
Problems in Power and Transportation	8	5.6
Contemporary Concepts of I.Ed.	7	4.9
Laboratory Planning	7	4.9
Problems in Coordination	6	4.2
Problems in Graphics	6	4.2
Others (Problems in Electricity-Electronics, Problems in Woods, etc.)	20	14.0
Education		
Educational Research	19	13.3
Statistical Methods	15	10.5
Tests and Measurements	9	6.3
Others (Sociology, Philosophy of Education, etc.)	36	25.2
Other Areas (Computer Science, Art, Special Education, etc.)	16	11.2

TABLE 27. EXTENT TO WHICH THE MASTER'S PROGRAM STIMULATED AN INTEREST IN AND PROVIDED THE PREPARATION FOR GRADUATE SERVICE ASSISTANTS TO ACHIEVE SELECTED GOALS

Goals	Amount of Stimulation Mean Values*	Amount of Preparation Mean Values*
To seek a teaching position in industrial arts education in a public school	1.9	1.6
To seek a teaching position in industrial arts education at the college or university level	1.9	2.0
To increase membership in professional organizations	2.0	2.2
To seek a doctoral degree in industrial arts education	2.3	2.1
To write for publication	2.6	2.6
To seek a teaching position in vocational-industrial education in a public school or post-secondary school	2.6	2.6
To seek an administrative position in industrial arts education	2.9	2.5
To seek a teaching position in vocational-industrial education at the college or university level	3.0	2.8
To seek a doctoral degree in vocational-industrial education	3.1	2.9
To seek an administrative position in vocational-industrial education	3.1	3.0
To seek a position in research	3.3	3.0

* Mean values were calculated using the scale explained on page 8.

TABLE 28. EMPHASIS PLACED ON SELECTED OBJECTIVES IN THE GRADUATE SERVICE ASSISTANTS' MASTER'S PROGRAM AND EMPHASIS THEY FEEL SHOULD BE PLACED ON THESE OBJECTIVES

Objectives	Emphasis in Program Mean Values*	Emphasis that Should Be Mean Values*
Developing teaching competencies	2.0	1.2
Developing curriculum development competencies	2.1	1.4
Developing technical competencies	2.1	1.7
Developing research competencies	2.2	1.8
Providing for general or liberal education	2.4	2.2
Developing administrative competencies	2.5	1.9

* Mean values were calculated using the scale explained on page 8.

TABLE 29. SELECTED ACTIVITIES ENGAGED IN BY GRADUATE SERVICE ASSISTANTS SINCE RECEIVING THE MASTER'S DEGREE AND MEAN VALUES REPRESENTING THE EXTENT TO WHICH THE MASTER'S PROGRAM PREPARED THEM FOR THESE ACTIVITIES

Activities	N	%	Amount of Preparation Mean Values*
Developing and implementing a curriculum	122	85.4	1.9
Developing instructional materials	129	90.3	1.9
Planning educational facilities	113	79.1	2.0
Implementing an innovative curriculum (i.e., I.A.C.P., Maryland Plan, etc.)	72	50.4	2.4
Supervising educational personnel	76	53.2	2.5
Systematically evaluating curriculum	84	58.8	2.5
Systematically evaluating instruction	86	60.2	2.5
Administering educational programs	63	44.1	2.6

* Mean values were calculated using the scale explained on page 8.

TABLE 30. MEANS OF PERCENTAGES OF MASTER'S DEGREE PROGRAM THAT GRADUATE SERVICE ASSISTANTS FEEL SHOULD BE DEVOTED TO SPECIFIC AREAS

Areas	Means of Percentages
Technical industrial education courses	30.5
Professional industrial education courses	29.0
Professional education courses (other than industrial education)	18.5
Research courses	11.5
Courses outside of education	10.5
Other (keep program flexible)	14.0

TABLE 31. COURSES THAT GRADUATE SERVICE ASSISTANTS FEEL WOULD BE OF VALUE TO MASTER'S DEGREE STUDENTS MAJORING IN INDUSTRIAL EDUCATION

Courses	Number	Percent
Curriculum Development in Industrial Education	26	18.2
Teaching Aids and Devices in Industrial Education	18	12.6
Technical courses	17	11.9
Educational Research	15	10.5
Evaluation	12	8.4
Supervision and Administration of the Vocational and Practical Arts	12	8.4
Teaching methods	12	8.4
Communication	11	7.7
Economics	10	7.0
Management	10	7.0
Innovative industrial arts programs, i.e., I.A.C.P., American Industry, etc.	8	5.6
Modern technology	8	5.6
Structure of industry	8	5.6
Laboratory Planning	7	4.9
Tests and Measurements	7	4.9
Classroom management	5	3.5
Research in Industrial Education	5	3.5
Current issues and problems in industrial education	4	2.8
Development of Industrial Education	4	2.8
Human growth and development	4	2.8
Industrial psychology	4	2.8
Industrial Synthetics	4	2.8
Industrial work experience	4	2.8
Machine repair and maintenance	4	2.8
Statistics	4	2.8
Career education	3	2.1
Contemporary Power and Transportation	3	2.1
Educational Supervision and Administration	3	2.1
Federal legislation	3	2.1
Manufacturing	3	2.1
Philosophy of Education	3	2.1
Philosophy of industrial education	3	2.1
Psychology of learning	3	2.1
Others (Ceramics, human relations, concepts of industry, etc.)	79	55.3
No response	44	30.8

TABLE 32. ADEQUACY OF LIBRARY MATERIALS AND INDUSTRIAL EDUCATION LABORATORY FACILITIES

Extent of Adequacy	Library Materials		Laboratory Facilities	
	N	%	N	%
More than adequate	26	18.2	46	23.2
Adequate	87	60.8	79	55.2
Less than adequate	23	16.1	13	9.1
No response	7	4.9	5	3.5
Totals	143	100.0	143	100.0

TABLE 33. AVAILABILITY OF BENEFICIAL ASSISTANCE PROVIDED GRADUATE SERVICE ASSISTANTS BY FACULTY MEMBERS BOTH INSIDE AND OUTSIDE OF INDUSTRIAL EDUCATION

Availability of Beneficial Assistance	Inside Department		Outside Department	
	N	%	N	%
Always available	105	73.4	50	35.0
Sometimes available	31	21.7	64	44.7
Very seldom available	1	0.7	14	9.8
Never available	1	0.7	1	0.7
No response	5	3.5	14	9.8
Totals	143	100.0	143	100.0

TABLE 34. ASPECTS OF THE MASTER'S PROGRAM THAT GRADUATE SERVICE ASSISTANTS FELT WERE OF MOST BENEFIT TO THEIR CAREER DEVELOPMENT

Aspects of Most Benefit	Number	Percent
Association with professional faculty members	35	24.5
Technical courses	19	13.3
Curriculum Development in Industrial Education	14	9.8
Entire degree program	10	7.0
Research courses	8	5.6
Association with graduate students	7	4.9
Teaching aids course	7	4.9
Being in a positive learning environment	4	2.8
Contact with specific professors	4	2.8
Creative project	4	2.8
The freedom to explore areas of interest	4	2.8
Graduate course papers	3	2.1
Having a flexible program	3	2.1
Supervision and Administration of the Vocational and Practical Arts	3	2.1
Tests and measurements courses	3	2.1
Graphic arts courses	2	1.4
Manufacturing courses	2	1.4
Methods courses	2	1.4
Statistics courses	2	1.4
Vocational education courses	2	1.4
Others (Seminar in Industrial Education, Woods courses, etc.)	12	8.4
No response	45	31.5

TABLE 35. ASPECTS OF THE MASTER'S PROGRAM THAT GRADUATE SERVICE ASSISTANTS FELT WERE OF LEAST BENEFIT TO THEIR CAREER DEVELOPMENT

Aspects of Least Benefit	Number	Percent
Some education courses	13	9.1
Development of Industrial Education	7	4.9
Most professional industrial education courses	4	2.8
Technical courses	4	2.8
Writing papers and reports	4	2.8
Courses poorly taught	3	2.1
Graduate course papers	3	2.1
Research papers	3	2.1
Coursework had little application to secondary school teaching	2	1.4
Several courses were irrelevant	2	1.4
Some courses outside of industrial education	2	1.4
Others (teaching aids course, statistics course, etc.)	10	7.0
No response	92	64.0

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TABLE 38. SUGGESTIONS FOR IMPROVING THE MASTER'S DEGREE PROGRAM

Suggested Improvements	Number	Percent
Help students to analyze individual needs and design programs for meeting those needs	15	10.5
Develop goals for the program and make them available to all graduate students	9	6.3
Emphasize innovative approaches in industrial education	8	5.6
Emphasize development of advanced technical competencies	7	4.9
Provide more opportunities to work with school personnel and programs	6	4.2
Up-date courses in department to make them relevant	6	4.2
Emphasize curriculum development	5	3.5
Emphasize teaching methods	5	3.5
Encourage those who view master's as technical degree to increase technical competencies	4	2.8
Offer research methods and statistics in department for those who plan to pursue the doctorate	4	2.8
Provide more opportunity to teach in program	4	2.8
Provide more options in industrial education professional courses	4	2.8
Recommend all industrial education professional courses for graduate assistants considering the doctorate	4	2.8
Recommend as broad a program as possible	4	2.8
Develop an evaluation plan to determine validity and effectiveness of courses in department	3	2.1
Place more emphasis on writing papers, reports, articles, and proposals	3	2.1
Recommend that students specialize in area outside of industrial education	3	2.1
Others (emphasize professional courses, emphasize A-V methods and materials, etc.)	27	18.4
No response	52	36.4

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